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ABSTRACT

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Alternative Education:

Evaluation and Implementation of EBCE

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Alternative Education:

Evaluation and Implementation of EBCE

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The Appalachia Educational Laboratory (AEL) has designed, developed, tested, and implemented an alternative educational program called Experience-Based Career Education (EBCE). The purpose of the program is to provide an alternative educational experience for a cross-section of high school juniors and seniors. This experience is characterized by an emphasis on direct employer-site experiences personalized to each student in terms of individual needs, interests, and abilities. EBCE is a voluntary, tuition-free alternative program of full-time learning and on-the-job career exploration, resulting in an accredited high school diploma. Students who complete the program enter college or training programs, or seek employment.

EBCE began in the U. S. Office of Education (USOE), which commissioned studies in early 1971 to explore the feasibility of experience-based learning In spring, 1972, four educational laboratories began to develop and test pilot versions of EBCE in a variety of economic and social settings. In 1973, the program was transferred from USOE to the National Institute of Education (NIE). Now, after three years of development and operation, the EBCE model is being disseminated nationally.

Instead of attending classes, as they might do if they remained in a regular high school, EBCE students (1) look over the many different places to work in the community, (2) look at their own values, interests, and aptitudes, (3) choose the places and the jobs they want to know more

about, and (4) spend one to 13 weeks at job sites they've selected. While EBCE students spend 70-80 percent of their time at job sites, they simultaneously complete their academic activities and receive the same credits that they would have received had they remained in the traditional high school programs. However, less rigorous applications (adaptations) of the model are being operated by several school systems.

The personalized instructional delivery system is a validated concept-centered curriculum covering all major discipline areas. The EBCE curriculum is transportable to most school systems. Learning activities are designed to be used in conjunction with commercially available materials and at experience sites in the community, thereby providing the base for an individualized learning program.

To help accomplish these objectives, EBCE provides individualized programs by professional teachers, who are called "learning coordinators" (LCs). Students and LCs are able to turn job experiences into academic experiences, and these into earned credits. This is accomplished by building interdisciplinary projects with specific learning objectives tailored to each student's academic needs. This unique academic delivery system thus identifies a learning coordinator as the person responsible for delivering, monitoring and evaluating a student's individualized program of studies.

One of the two major program priorities is to create a set of learning experiences which is uniquely appropriate to each individual. As a result, each student experiences his own special community in terms of the people he meets, the community sites he chooses, the curriculum he pursues, and the experiential learning methodology he uses.

The program's other major commitment is to the belief that "courses" do not have to be separate sets of events. The content of social studies, English, science, mathematics and career development are traditionally different, yet within AEL's EBCE program they are often combined into single sets of activities. An EBCE student, for example, may conduct biological research and experimentation for science credit, while exploring a particular career in ecology for career development credit. The student may write reports on both of these activities and have them evaluated for English credit. The student may supplement any of these "on-site" activities with "in-house" tutoring, small group discussions, texts or independent study activities.

The EBCE program works because the community wants it to work. To take community interests into account, EBCE works with a Community Advisory Council. Members of the Council are students, parents, and representatives of business, industry, labor, education and government. The Council reflects the community's career opportunities as well as its attitudes toward public education.

Objectives

As a research and development program, EBCE has naturally placed considerable emphasis on evaluation -- trying to ascertain what impact the program has had on the students who have participated. Both students and their parents and participating employers have been assessed in an effort to achieve a comprehensive, detailed and valid evaluation of the program. Throughout its development, AEL has also deliberately involved local decision-makers in discussions of program content, operations, evaluation,

and marketing strategies. The purposes of this paper are to delineate the procedural methodology for determining the effects of participation in or involvement with EBCE on various respondent groups and to explicate the marketing, implementation, and servicing model utilized by AEL in the dissemination of its EBCE program

Theoretical Framework

The development and dissemination of a product requires evaluation in a rigorous manner to insure the consumer, the developer, and the funding agency an effective and efficient product. As evidence of the central importance of evaluation, the National Institute of Education (NIE) is currently requiring evaluation as a contingency for further funding.

Evaluation activities have three primary purposes in supporting product development: (1) provide information for revisions, (2) provide information on effectiveness of various activities, and (3) provide information on required funding. Evaluation information is used by many different audiences of decision-makers and each may require different types of information.

The AEL/EBCE staff needs evaluation information primarily for product revision whereas the funding agency, the National Institute of Education (NIE), needs evaluation information on product effectiveness and required funding. The AEL management staff is concerned with overall costs, product effects, and timelines. Consumers are primarily concerned with product effectiveness and costs. Included among the consumers would be school systems, regional educational agencies, State Departments of Education, researchers, and other potential product users. Table 1 displays a matrix of evaluation data needed by various audiences.

Table 1

Audience Needs for Evaluation Data

		AUDIENCES				
		AEL/EBCE Staff	NIE	AEL Mgmt.	LEA SEA	R & E
EVALUATION DATA	Product Revision	X				
	Product Effectiveness	X	X		X	X
	Costs		X	X	X	
	Timelines		X	X		
	Implementation	X	X	X	X	

The results of EBCE evaluation should, therefore, have application for the implementation of the EBCE program in a broad spectrum of settings and not just the Appalachian cultural setting in which the results were obtained.

Throughout its development, AEL has deliberately involved local decision-makers in the conceptualization of a model for disseminating EBCE. The theoretical background for the AEL/EBCE diffusion model is fully explicated in EBCE Replication Prospectus, 1974 and in A Diffusion Guide (Sanders and McCutcheon, 1973). Both of these documents examine the various diffusion perspectives cited in Roberts (1975), Rogers (1974), and Havelock (1973), among others, concluding that Rogers' Interpersonal Model of Diffusion most closely approximates the AEL/EBCE model's features, because it relies on extensive personal interactions with the opinion leaders and decision makers of those local education agencies that take the time and have the interest sufficient to visit our demonstration site.

Methods

Evaluation data have been collected from students (in the areas of academic achievement, career maturity, career interests, and personal attitudes), parents, employer site personnel, program staff, and school personnel during the three years of design and development. The basic components of the implementation network were ascertained through an extensive Stakeholder Analysis (market survey) which AEL conducted in FY'74.

Evaluation

AEL/EBCE initiated the development of evaluation materials for assessing the effect of EBCE on various respondent groups early in 1972. As the program developed, evaluation instruments were revised, deleted, or generated. During the first year of development the evaluation design was a one-group (EBCE students only) pretest-posttest design; during the second year the design was a nonequivalent control group design utilizing pre-post testing on EBCE and comparison group students; and during the third year a true experimental pre-post control group design was used. Standardized and non-standardized instruments were administered to the various respondent groups. These evaluation data are then utilized, according to the diffusion model, in the marketing and implementing of EBCE.

Implementation

According to the diffusion Model, the AEL/EBCE Program would be installed in 50-70 sites throughout the country by the end of FY'78. These sites would be supported by a network which includes representatives from regional teacher training institutions and from state departments of education. This network would function to facilitate the institutionalization and

maintenance of the innovation and would provide data to external agencies monitoring the long-range effects of EBCE on individual students, on school system organization, on community involvement and on support of public education.

This network will be formally operationalized in FY'77. The network's origins are explicated through the following components of the diffusion model:

1. Demonstration/Training Center - Since the beginning of FY'75, AEL/EBCE has operated a demonstration site in Charleston, West Virginia. This site informed 125 visitors from 32 school systems about EBCE between January and June of 1975. The average duration of individual visits is 1.5 days. Thirty persons from FY'76 adopting sites received training at the Charleston Center. Seven days of training are currently required of EBCE personnel installing the AEL/EBCE model.
2. Pilot Sites - In FY'76, 4 of the 10 school systems installing AEL/EBCE were to be identified as "pilot sites," eligible to become AEL/EBCE regional demonstration sites in FY'77. Criteria for identifying pilot sites included (a) degree of congruency with the AEL/EBCE model; (b) representativeness of student population served; (c) support of community representatives from business, industry, labor, commerce and the professions; (d) extent of cooperation with AEL's needs for evaluation data; (e) geographic promise of the adopter as a demonstration site; (f) relationship of adopter to state department of education and the latter's support of the innovation; (g) commitment of adopter to continue

support for and expansion of the program; (h) proximity of reputable teacher-training institution capable of and interested in training personnel from future EBCE adoption sites in the region; and (i) potential for assuming position of leadership in the EBCE network.

3. Market Demand Sites - Those included in this category were sites which deliberately elected to adopt only small pieces of the AEL/EBCE program or elected to extensively adapt the program to address different educational goals.

4. Part D Sites - The Office of Education (OE) has set aside $6,000,000 to be awarded to at least one LEA in each of the 10 OE regions who are successful in the FY'76 competition for Part D Vocational Act funds. Other submitters may propose various adaptations of the program. AEL and each of the other three laboratories which have operationalized EBCE programs have presented their programs to representatives from the 50 states and territorial departments of education in joint regional meetings. Successful bidders are to be announced in July, 1976 and implementation is to occur in FY'77.

5. Implementation Process - Once an adopter submits a letter of intent to AEL, about three months lead-time (according to AEL's experience) is required before the program becomes operational. During that time, staff are selected, training is conducted, employment sites are analyzed, program location readied, materials put in place and a community advisory council recruited. Implementation costs range from $6300 - 13,000 depending on the size of the program. This

amount includes 10-20 days of on-site technical assistance from AEL personnel.

6. Technical Assistance - This complex innovation requires AEL/EBCE to make technical assistance (TA) available to adopters at least during the first year of operation. Requests for TA vary from adopter to adopter, but generally include assistance in evaluation, site analysis (or an on-site presentation to local community leaders), arrangement of EBCE personnel's materials and files, and conducting student orientation.

Results

The results of implementing the evaluation plan and developing implementation strategies for the dissemination of EBCE nationally are presented below.

Implementation

The Stakeholder Analysis conducted in FY'74 demonstrated that potential adopters from various educational agencies were very accepting of the goals and objectives of EBCE, but were concerned about the availability of (rank-ordered): 1) training, 2) technical assistance, and 3) local/federal funding (Sanders, 1974). This analysis also revealed that regional educational agencies and/or area vocational schools were as much potential adopters as were individual school systems; that superintendents were the key decision-makers in the adoption process; that presentations by EBCE students, parents, employers and the Community Advisory Council were as convincing as those of EBCE staff members; that personal interaction with adopters, their colleagues and constituents was a most critical ingredient

in any marketing effort. (Similar conclusions were reported by Walters, 1975 in his annual report on the dissemination of the Wisconsin R&D Center's Multi-Unit Elementary School Program.)

Twelve educational agencies have operational AEL/EBCE programs in FY'76. In addition, Kanawha County Public Schools has expanded its program from the field-test school to three additional high schools. Finally, two government agencies have joined their resources to provide a total of 15 million dollars over the next 3 years for the widespread diffusion of the program, including value research on the diffusion of this innovation. Table 2 displays the current results of the AEL/EBCE marketing strategy as reported in an NIE informational brochure.

Table 2

AEL/EBCE Dissemination

Number of Replications	15
Number of States	8
Number of Students	375
Number of Experience Sites	665

States	Schools	Community*	Funding
West Virginia	AEL/EBCE Demo Site	S/R	NIE
	Charleston High School	U/S	Local
	South Charleston High School	S/R	Local
	Stonewall Jackson High School	S/R	Local
Iowa	Ames Senior High School	S/R	Local
Louisiana	Acadia Parish	R	Local
New York	St. Francis II School	U	Local/ Private
	N. Syracuse School District	S	Local
	Baldwinsville Academy and High School	S	Local
	Tully Central School	R	Local
	Dryden School District	R	Local

Table 2 (cont'd)

States	Schools	Community*	Funding
Illinois	Champaign School District	U	Local
Connecticut	Portland High School	S	Local
Georgia	Bremen Public Schools	S/R	Local
Florida	Ft. Lauderdale Public Schools	U	Local

*U - Urban
S - Suburban
R - Rural

Evaluation

The results of the EBCE evaluation are presented by school year, since different evaluation designs were used.[1]

1972-73. The Iowa Test of Educational Development (ITED) was given to EBCE students when they entered the program and again near the completion of the program. Students showed a growth rate that was statistically greater than expected in language arts. Greater than expected, but not statistically significant, growth rates were shown in mathematics, social studies, social science, and in the composite scores. A small growth was also indicated in reading.

Another important objective of the EBCE program is to prepare students to make career decisions. Students were queried about their career plans in the final student interview. Twenty-seven of the forty-four students (61%) reported firm career choices while eight students (18%) had not made a choice or had not narrowed down their fields of interest. In every case, they reported that the EBCE program had influenced their career decisions. When asked what they had specifically gained from the EBCE program, 49% of the responses were related to occupational information or job-related skills.

[1] See References for listing of Summary or Final Evaluation Reports.

Parents of the EBCE students were asked to identify the advantages of EBCE over the home high school. At least 42% believed it was the job information the students had received. A second question was asked to find out how the program had affected their child's career plans. Fifty-eight percent reported that their child was more certain of a career choice, 25% reported no change, and 7% said their child was less sure of a career choice.

1973-74. EBCE students were given the ITED battery when they entered the program and again near the end of the year. Comparison of the pretest and posttest results showed that there was significant growth in reading comprehension, language arts, mathematics, and science.

Three student questionnaires (two administered in January and one in April, 1974) showed that students had very positive feelings toward attending EBCE and toward further participation in the program. Students consistently rated the EBCE program higher than their home high schools on opportunities to learn about occupations, motivation to learn, and opportunities for general learning.

Twenty parents were randomly selected and interviewed. Most of the parents spoke favorably about EBCE. All the parents felt they understood what EBCE was all about, and most said they would encourage their children to enroll in the program again. Parents commented favorably about the program in several areas, including the opportunity to explore careers and jobs, the individualized instruction, and the chance for their children to learn about the outside world while becoming more responsible and self-reliant. Most felt that EBCE was responsible for their child's present career plans because they had been given much more opportunity to clarify career goals. As a result of participation in the program, parents felt their children had become more confident, responsible, and mature.

1974-75. The Comprehensive Tests of Basic Skills (CTBS) was administered pre-post to both the EBCE and control students. While students showed no growth over the year, there were also no differences between the two groups on reading comprehension, arithmetic concepts, or arithmetic applications.

The Career Maturity Inventory (CMI) was administered to both EBCE and control students. Although there were no differences on the five career knowledge subtests, the EBCE students did exhibit significantly more positive attitudes than control students on the attitude subtest. Similarly, EBCE students had more positive attitudes than control students towards their learning environment, as measured by four subtests of the Assessment of Student Attitudes (ASA) inventory.

Parents expressed very positive attitudes toward their children's participation in EBCE and employers at experience sites also indicated very positive feelings toward their involvement in the EBCE program.

Educational Importance

The voluminous amounts of evaluation data describe an energetic and successful EBCE curriculum. Statistics point to positive educational effects, and testimonials ascribe a great deal of emotional and economic improvement to the EBCE program. Such data lend credence for continuation and implementation of EBCE as an alternative educational program. Although the program development phase has ended, the implementation phase has begun. Evaluation must also shift directions with respect to new areas of concern, different needs of different audiences, and the different types of sites adopting the EBCE program.

Underscoring the obvious, evaluation data show that EBCE generally is one of the most promising innovations to emerge from the Laboratories. To date, response from LEAs to the program has been most favorable. For example, AEL has encountered little resistance to the program in its home county - the same Kanawha County which has been strapped with an on-going textbook controversy. Twelve other LEAs in five states have now implemented the program. Through continued careful study of the spread and effects of the adoption of EBCE, much can be learned about the general implementation of curricular innovations in the nation's schools.

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